REMARKS

1. Applicant would like to thank the Examiner for the interview conducted on September 4, 2003, which provided greater insight into the nature of amendments that can put the pending claims in condition for allowance. Accordingly, Applicant requests reconsideration of the previously rejected claims in light of the foregoing amendments and the following remarks.

2. Reconsideration and allowance of amended independent claims 21, 31 and 39 are respectfully requested in view of the foregoing amendments and the following remarks. Claims 22-30 ultimately depend on amended claim 21, claims 32-38 ultimately depend on amended claim 31, and claim 40 ultimately depends on amended claim 39, and therefore also are considered to be in condition for allowance.

During the interview the Examiner agreed with Applicant that *Kiyono* does not teach or suggest "A method for reducing the thickness of an entire semiconductor chip or die ... the method comprising: ... etching said semiconductor chip or die." Instead, *Kiyono* at best suggests reducing a part, or a component of, a "semiconductor chip or die." Thus, claims 21, 31 and 39 have been amended to replace "semiconductor unit" with semiconductor "chip or die." This amendment distinguishes *Kiyono*.

Furthermore, *Kiyono* by itself or in combination with *Hudak et al.* does not teach or suggest "attaching permanently at least a part of said first surface to said carrier." This additional amendment should further distinguish claims 21, 31 and 39 as amended from either *Kiyono* or *Hudak et al.* or the combination thereof.

Also, *Hudak et al.* by itself does not teach or suggest the method of amended claims 21, 31 and 39. There are several differences between the foregoing amended claims and the disclosure of *Hudak et al.* The method of thinning a die according to *Hudak's* disclosure (lines 19-29 of col 3) comprises: (1) coating the top of a die with a polyimide material; (2) curing the coated die at 80° C for one minute to drive off solvents; (3) curing the die again at 350° C for one hour in a vacuum; (4) bonding a handle-wafer to the polyimide layer on the die using wax or an adhesive; (5) thin the die to a thickness less than or equal to 50 μm from the

bottom of the die using reactive ion etchants, wet chemical etchants, dry chemical etchants, mechanical grinding, or a combination thereof; and (6) melting the wax, dissolving the adhesive, or chemically etching away the handle-wafer. The die according to *Hudak et al.* disclosure is processed by the steps (1), (2), (3), and (4) before being thinned.

However, the handle-wafer according to *Hudak's* disclosure does not correspond to the carrier according to the present invention. There are many structural differences between *Hudak's* handle-wafer and the carrier recited in the present claims. As a result of the differences, *Hudak's* handle-wafer must be removed from the die by step (6) (lines 27-29 of column 3) after the die is thinned. In contrast, the carrier according to the present invention is initially "physically separate from said semiconductor chip or die" and later "permanently" attached to the semiconductor chip or die to form the main part of an IC (integrated circuit) package product. The method for thinning dice in quantity according to *Hudak's* disclosure (lines 33-50) also can be distinguished in a similar manner.

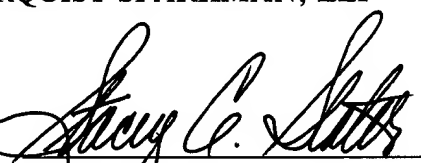
Furthermore, the second supporting substrate according to *Hudak's* disclosure does not correspond to the carrier of the present invention either. Again, there are many differences between these structures. One of the differences is that the second supporting substrate according to *Hudak's* disclosure is bonded to the dice after the dice have been thinned, while the carrier according to the present invention is attached by the semiconductor chip or die which is to be thinned. Another difference is that the second supporting substrate according to *Hudak's* disclosure is bonded to the dice via their backsides, i.e., the sides from which the dice have been thinned. The carrier according to the amended claims of the present invention is attached by the first surface of the semiconductor chip or die, wherein the second surface instead of the first surface is the side from which the semiconductor chip or die is thinned.

Thus, *Kiyono* and *Hudak et al.* individually or in combination do not teach all the features of the method defined by the amended claims 21, 31 and 39 of the present application. To applicant's best knowledge, no combination of any prior art has ever taught all the features of the method defined by amended claims 21, 31 and 39 of the present application. Accordingly, amended claims 21, 31 and 39 overcome the obviousness rejection based on *Kiyono* and *Hudak et al.*, are in condition for allowance and such action is respectfully requested.

Claims 22-30 ultimately depend on the amended independent claim 21, claims 32-38 ultimately depend on the amended independent claim 31, and claim 40 ultimately depends on the amended independent claim 39. All pending claims therefore are considered to be in condition for allowance and such action is also respectfully requested.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By 

Stacey C. Slater
Registration No. 36,011

One World Trade Center, Suite 1600
121 S.W. Salmon Street
Portland, Oregon 97204
Telephone: (503) 226-7391
Facsimile: (503) 228-9446